

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A proxy (30) for at least one end-to-end data flow in a network, ~~characterised in that it comprises~~ comprising:

an estimation unit (300), for estimating a current minimum data load necessary to occupy a bandwidth available to said flow in said network, said estimation unit (300) outputting a flow's pipe capacity estimation;

a comparison unit (302), for comparing said estimated pipe capacity with a predetermined capacity threshold ;

a decision unit (304), for deciding to proxy said flow if said estimated pipe capacity lies above said capacity threshold; and

a routing unit (306), for routing said flow according to the decision.

2. (Currently Amended) A proxy according to claim 1, ~~characterised in that~~ wherein said routing unit (306) is adapted to route from the network layer of said network to a higher protocol layer of said proxy, data that are to be transmitted through said end-to-end flow if said estimated pipe capacity lies above said capacity threshold.

3. (Currently Amended) A proxy according to claim 1 ~~or 2, characterised in that~~ wherein said capacity threshold depends on a processing load of said proxy.

4. (Currently Amended) A proxy according to claim 1, ~~2 or 3, characterised in that~~ wherein said estimation unit (300) is adapted to take into account local information received from said network and representing the state of said network.

5. (Currently Amended) A proxy according to ~~any of the preceding claims,~~ claim 1 wherein said flow's pipe capacity estimation is based on

the end-to-end worst-case round trip time and the bit rate available to said flow in said network.

6. (Currently Amended) ~~A node in a wireless network, characterised in that it comprises a unit adapted to route~~ A method for routing an end-to-end flow from a sending entity to a receiving entity in said a wireless network, either directly, or via a proxy, ~~as a function of~~ comprising the steps of:

estimating a flow's pipe capacity estimation, resulting from an estimation of a current minimum data load necessary to occupy a bandwidth available to said flow in said network,

comparing ~~a comparison~~ of said estimated pipe capacity with a predetermined capacity threshold, and

determining ~~a decision~~ to proxy said flow if said estimated pipe capacity lies above said capacity threshold.

7. (Cancelled)

8. (Currently Amended) A method for proxying at least one end-to-end data flow in a network, characterised in that it comprises steps of:

estimating (40) a current minimum data load necessary to occupy a bandwidth available to said flow in said network, so as to obtain a flow's pipe capacity estimation;

comparing (42) said estimated pipe capacity with a predetermined capacity threshold;

deciding (44,46) to proxy said flow if said estimated pipe capacity lies above said capacity threshold; and

routing said flow according to the decision.

9. (Currently Amended) A method according to claim 8, wherein ~~in that~~ characterised in that said end-to-end flow is routed from the network layer of said network to a higher protocol layer if said estimated pipe capacity lies above said capacity threshold.

10. (Currently Amended) A method according to claim 8 ~~or 9, characterised in that~~ wherein said capacity threshold depends on a processing load involved in proxying.

11. (Currently Amended) A method according to claim ~~8, 9 or 10, characterised in that~~ wherein said estimation step ~~(40)~~ comprises a step of taking into account local information received from said network and representing the state of said network.

12. (Currently Amended) A method according to claim 8 wherein ~~any of claims 8 to 11, characterised in that~~ said flow's pipe capacity estimation is based on the end-to-end worst-case round trip time and the bit rate available to said flow in said network.

13. (Currently Amended) A method according to claim 8 ~~any of claims 8 to 12, wherein~~ said flow is transmitted between a sending entity and a receiving entity via a node in said network, ~~said method being characterised in that~~ wherein said routing step is carried out in said node.

14. (Currently Amended) A method according to claim 13, wherein ~~characterised in that~~ the flow is routed from the node to a proxy, processed in said proxy and sent towards the receiving entity.

15. (Currently Amended) A proxy for at least one end-to-end data flow in a network, comprising computer program product, loadable into a computer, ~~characterised in that it comprises software code portions for implementing the steps of :~~

means for obtaining a flow's pipe capacity estimation, resulting from an estimation of a current minimum data load necessary to occupy a bandwidth available to said flow in said network,

means for performing a comparison of said estimated pipe capacity with a predetermined capacity threshold,

means for performing a decision to proxy said flow if said estimated pipe capacity lies above said capacity threshold, and

means for initiating a routing of said flow according to the decision, when the product is run on a computer.

16. (New) A method according to claim 6, wherein said end-to-end flow is routed from a network layer of said network to a higher protocol layer if said estimated pipe capacity lies above said capacity threshold.

17. (New) A method according to claim 6 wherein said capacity threshold depends on a processing load involved in proxying.

18. (New) A method according to claim 6 wherein said estimation step comprises the step of taking into account local information received from said network and representing the state of said network.

19. (New) A method according to claim 6 wherein said flow's pipe capacity estimation is based on the end-to-end worst-case round trip time and the bit rate available to said flow in said network.

20. (New) A method according claim 6 wherein said flow is transmitted between a sending entity and a receiving entity via a node in said network, said routing step is carried out in said node.

21. (New) A method according claim 20 wherein the flow is routed from the node to a proxy, processed in said proxy and sent towards the receiving entity.

22. (New) The proxy according to claim 15 wherein said means for obtaining said pipe capacity estimation takes into account local information received from said network and representing the state of said network.

23. (New) The proxy according to claim 15 wherein said pipe capacity estimation is based on the end-to-end worst-case round trip time and the bit rate available to said flow in said network.